Appendix 4|Data Extraction Tools

Background
We collected all data directly in Microsoft Excel (2010). As part of an on-going process of introducing software to facilitate the guideline development process, the ERBP MST used two formats for data extraction and collation. Whereas as the member of the MST would use both formats for data entry, the workgroup member would only use one to avoid confusion and limit user-friendliness of the systems. Feedback received from the workgroup members and experience within the MST using these formats was used to guide further development of our software arsenal.

Format used for the diagnostic questions in chapter 1
For the diagnostic questions we designed and piloted an evidence table for raw data entry. The table queried information relevant information on study characteristics, results and risk of bias. Both entries resulting from independent data extraction by both a member of the workgroup and a member of the ERBP MST were checked manually, discrepancies resolved by consensus and merged in the final evidence table used for informing the recommendations and published with the guideline. (Appendix 6)

Format used for question on speed of correction in chapter 2
For the question on speed of correction we designed and piloted an evidence table for raw data entry. Due to time- and workforce constraints we decided a single member of the MST would extract and compile the evidence – exclusively coming from case-series and case-reports. (Appendix 6)

Format used for the question on therapeutic strategies in chapter 2
For the question on therapeutic strategies (chapter 2, question 1: In patients with hypotonic hyponatraemia, which treatments are effective in improving outcomes?) the ERBP MST developed a data extraction tool to aid standardized data collection. The tool was programmed in Microsoft Excel (2010) using Visual Basic. We introduced closed questions with drop-down answer lists whenever possible to improve data quality. The tool allowed automatic collection of the entered data into a database and semi-automatic cross-checking of the data independently entered by two reviewers. It also facilitated the generation of the evidence tables directly from the collated dataset. As no data required manual copying into a different format after it had been entered by the reviewer, we believed this would reduce error in handling of the data. One member of the MST piloted the tool using five publications of different design (Randomised controlled trial, retrospective cohort study, non-comparative study, interrupted time-series, case-series and case-report) to check for completeness of the questionnaire, errors in the programming and collation of the data in the database.

Data were compiled centrally by the ERBP methods support team. We constructed tables displaying the data extraction of both reviewers and both reviewers checked the data independently. Any discrepancies were resolved by consensus and if no consensus could be reached, an independent referee resolved any disagreements. From this, we produced a merged consensus evidence table for informing the recommendations. This full table is published with the guideline.